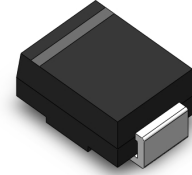


Effective Super Fast Recovery Diodes

ES5AB~ES5JB
50 to 600V
5A
DO-214AA(SMB)

Features

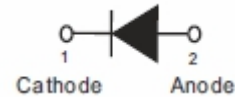
- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Super fast reverse recovery time
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives


DO-214AA(SMB)

Mechanical Data

- ◆ Case : SMB
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight : 0.1g / 0.003oz

Functional Diagram



Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Parameter		Symbol	ES5AB	ES5BB	ES5CB	ES5DB	ES5EB	ES5GB	ES5JB	Unit
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage		V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage		V _{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current		I _{F(AV)}	5							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load		I _{FSM}	100							A
Maximum Forward Voltage at 5A		V _F	1.0				1.25		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	Ta=25℃	I _R	5							μA
	Ta=125℃		100							
Typical Junction Capacitance at V _R =4V, f=1MHz		C _j	50							pF
Maximum Reverse Recovery Time ⁽¹⁾		t _{rr}	35							ns
Typical Thermal Resistance ⁽²⁾		R _{θJA}	45							℃/W
		R _{θJC}	15							
Operating and Storage Temperature Range		T _J , T _{stg}	-55 to +150							℃

NOTES: (1) Measured with $I_F = 0.5 A$, $I_R = 1 A$, $I_{rr} = 0.25 A$.

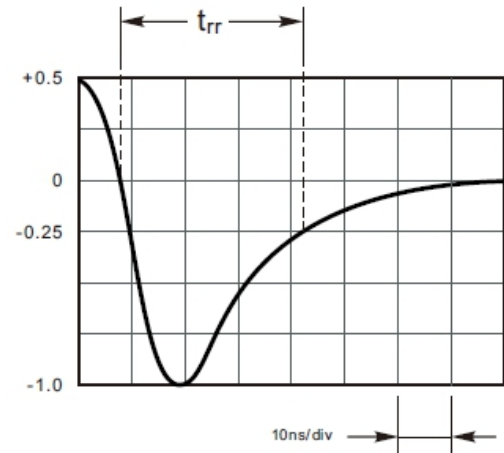
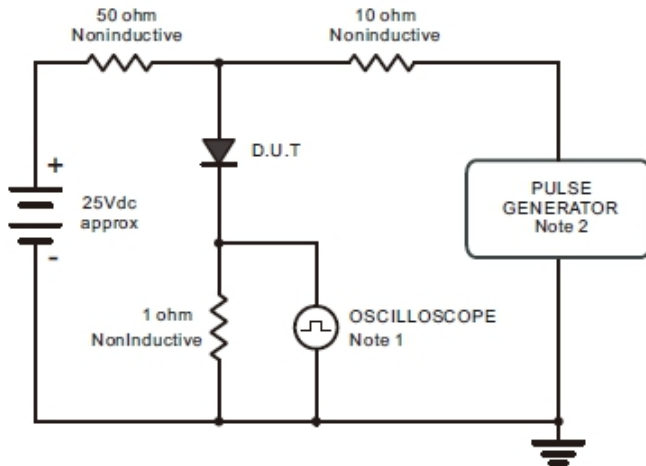
(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

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Rating and Characteristic Curves

Fig.1. Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Rise Time = 10ns, max.
Source Impedance = 50 ohms.

Set time Base for 10ns/div

Fig.2. Maximum Average Forward Current Rating

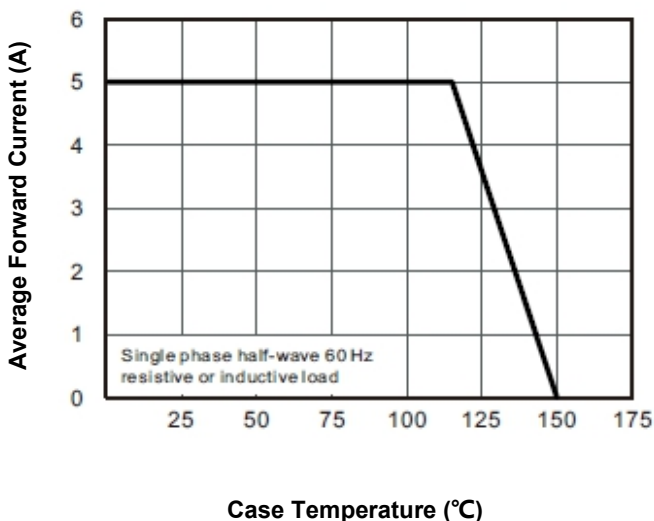
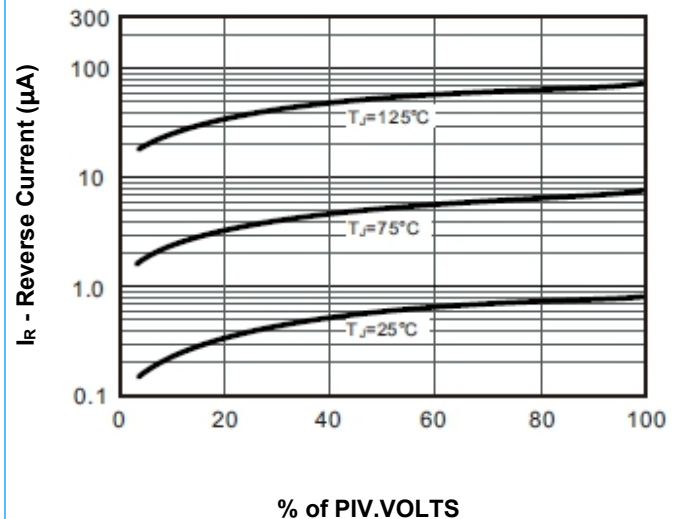


Fig.3. Typical Reverse Characteristics



Effective Super Fast Recovery Diodes

ES5AB~ES5JB
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Rating and Characteristic Curves (Continue)

Fig.4. Typical Forward Characteristics

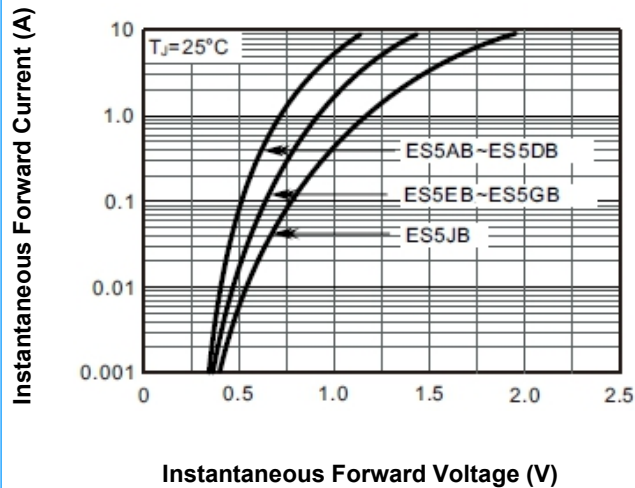


Fig.5. Typical Junction Capacitance

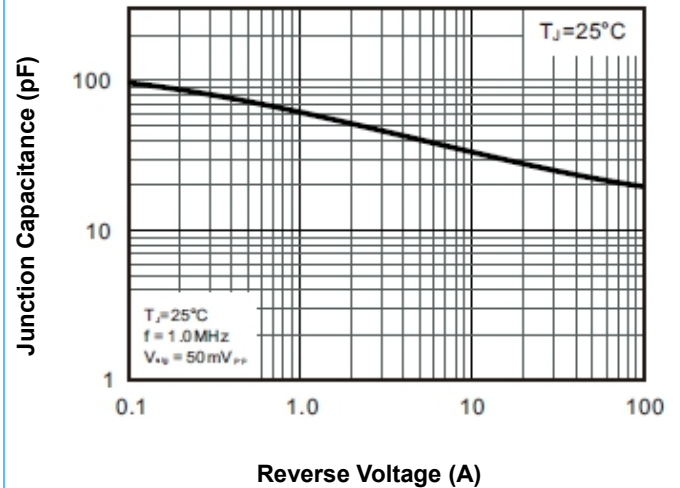
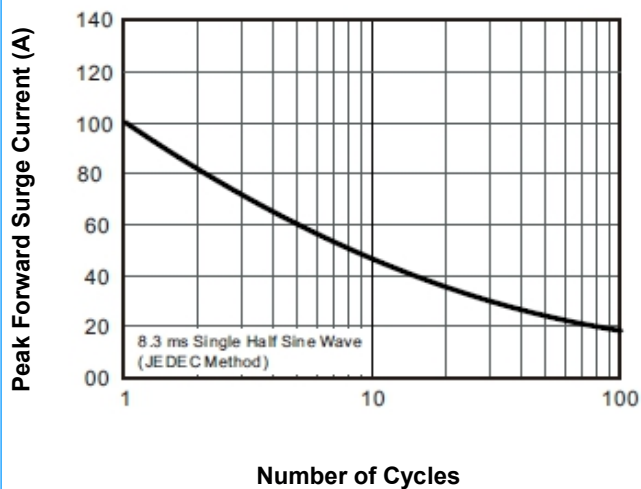


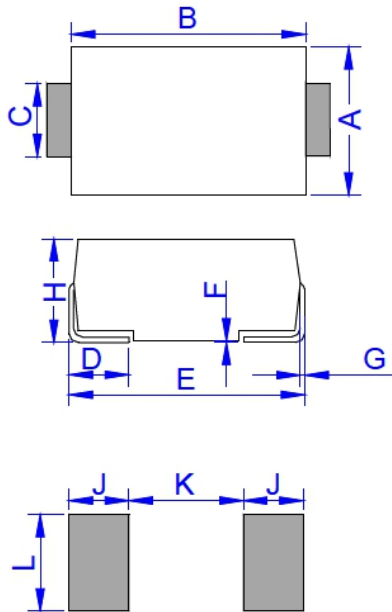
Fig.6. Maximum Non-Repetitive Forward Surge Current



Effective Super Fast Recovery Diodes

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DO-214AA(SMB)

DO-214AA(SMB) Package Outline



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.25	4.85	0.167	0.191
C	1.90	2.20	0.075	0.087
D	0.75	1.52	0.030	0.060
E	5.10	5.40	0.201	0.213
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.20	2.80	0.087	0.110
J	2.20	--	0.087	--
K	--	2.60	--	0.102
L	2.30	--	0.091	--

Packaging Information

Part Number	Component Package	Quantity
ES5AB~ES5JB	DO-214AA (SMB)	3000 PCS/REEL

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